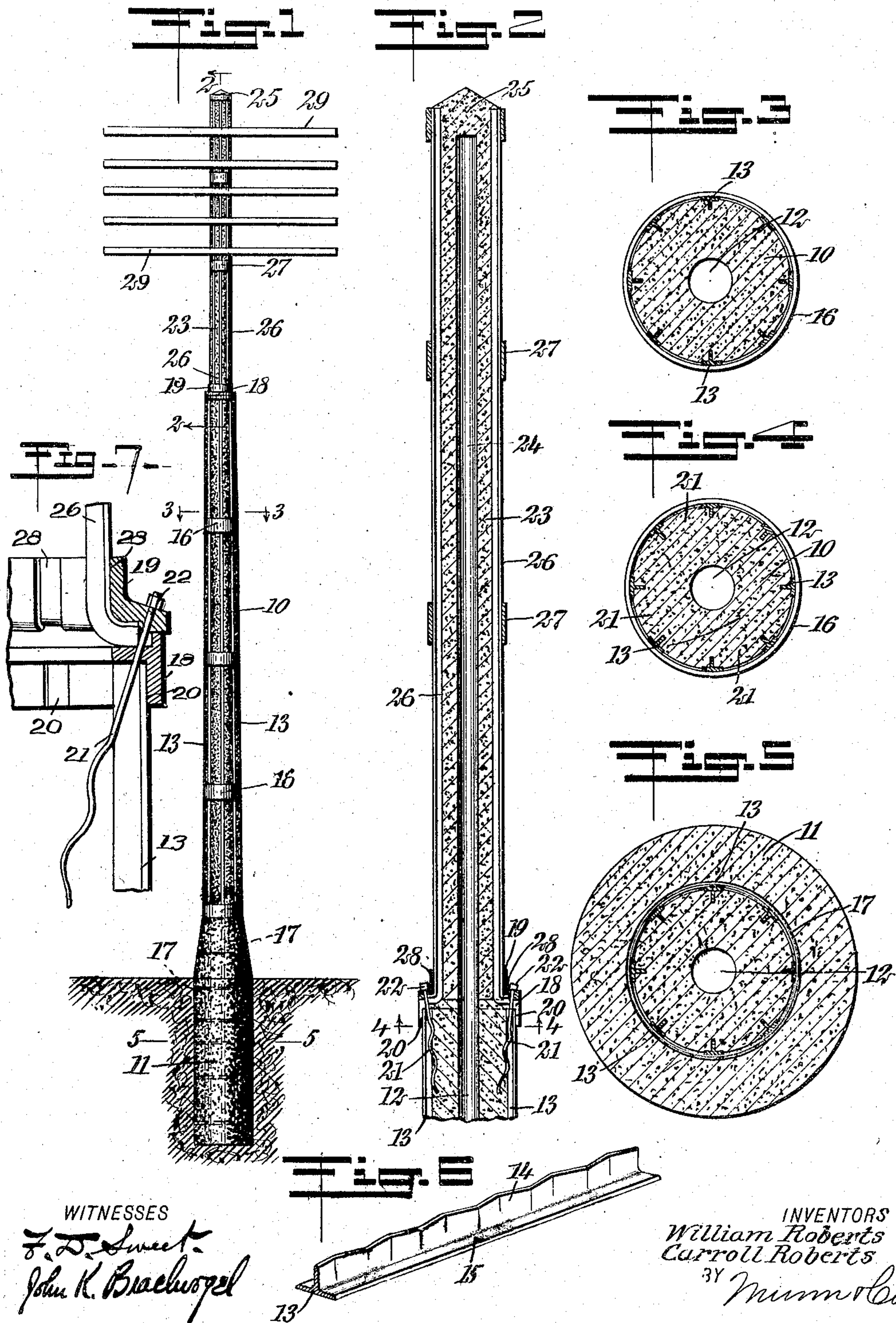


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POLE.
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919,772.

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WITNESSES

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WILLIAM ROBERTS AND CARROLL ROBERTS, OF SPRINGFIELD, OHIO.

POLE.

No. 919,772.

Specification of Letters Patent.

Patented April 27, 1909.

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To all whom it may concern:

Be it known that we, WILLIAM ROBERTS and CARROLL ROBERTS, citizens of the United States, and both residents of Springfield, in the county of Clark and State of Ohio, have invented a new and Improved Pole, of which the following is a full, clear, and exact description.

This invention relates to poles, and is particularly useful in connection with concrete or cement poles, for supporting electric circuit conductors or other lines.

More specifically, the invention relates to poles or standards formed from concrete or other plastic substances adapted subsequently to harden, and having as reinforcing tension members embedded or partially embedded therein, T-irons or similar elongated members, and further having annular holding members encompassing the tension members, the poles being formed in sections secured together by a connection of special form.

An object of the invention is to provide a simple, strong and inexpensive concrete pole for carrying electric wires and the like, which can be easily manufactured, and is attractive in appearance, and which has a base or butt so formed that the metal or other tension members are embedded therein and thus do not come into contact with the ground.

A further object of the invention is to provide a pole of the class described which may consist of a number of sections, and which has suitable means for firmly securing the sections together.

A still further object of the invention is to provide a pole, the body of which is fashioned from concrete or the like, and which has tension members of metal or other suitable material and of standard types or forms.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is an elevation of a pole of our invention, showing the same in position and arranged to carry telegraph or telephone wires; Fig. 2 is an enlarged longitudinal section on the line 2—2 of Fig. 1; Fig. 3 is an

enlarged transverse section on the line 3—3 of Fig. 1; Fig. 4 is an enlarged transverse section on the line 4—4 of Fig. 2; Fig. 5 is an enlarged transverse section on the line 5—5 of Fig. 1; Fig. 6 is a perspective view showing one of the reinforcing tension members; and Fig. 7 is an enlarged longitudinal section showing a detail.

Before proceeding to a more detailed explanation of our invention, it should be clearly understood that while the term "concrete" is used hereinafter in the description and in the claims, we do not wish to limit ourselves to this composition, but use it merely as an example. The body of the pole can be fashioned from any suitable plastic material or composition which is adapted subsequently to harden or set. The reinforcing members consist preferably, of standard iron or steel pieces such as T-irons, rings or the like. Certain of the parts, such as the connecting members between the pole sections, are necessarily of special form and may be fashioned from cast-iron or any other material adapted to the purpose. We prefer to form the poles for certain heights, of one piece, and for heights exceeding a certain height, we prefer to form them from a plurality of sections, preferably two in number. The pole has an enlarged base or butt which is embedded in the ground or otherwise suitably supported, to hold the pole in a perpendicular or normal position. The tension and reinforcing members are fully embedded in the butt, so that when the pole is in position in the ground these members are not subject to corrosion and do not come in contact with the ground.

Referring more particularly to the drawings, 10 represents the concrete body of the pole, which tapers outwardly to an enlarged butt 11. The pole is preferably tapering in form and has a longitudinal bore 12 which renders the pole hollow and consequently, lighter. We employ tension members, comprising T-irons 13 having webs 14 corrugated or otherwise roughened, and flanges 15 of the usual form. The tension members 13 are arranged longitudinally of the pole body and have the webs 14 embedded therein. The flanges 15 lie adjacent to the outer surface of the body, as is shown most clearly in Figs. 3 and 4. Annular bands 16 are arranged upon the pole body at separated points and encompass the body together with the tension

members 13. It will be understood that the tension members 13 are embedded in the concrete when the pole body is molded. The encompassing members 16 may be placed upon the pole body at the same time, though we prefer to shrink them in position after the pole body has been molded. The tension members 13 extend into the butt 11 of the pole and are completely embedded therein. They are embraced by rings 17 which are of course, likewise embedded, and which serve to strengthen the butt as well as to hold the members 13 in position when the pole is being molded.

When the poles are intended to be comparatively low, the upper end is provided with a suitable cap to close the bore 12, or the concrete itself is formed into a closing cap. When a further section is desired upon the body 10, a crown 18 is used which fits upon the top of the pole and is adapted to carry a removable annular collar 19 having a laterally extending flange 19^a. The crown has recesses 20 which receive the upper ends of the tension members 13. The crown further, has openings which are adapted to receive the projecting ends of bolts 21 having the shanks preferably of sinuous form and embedded in the pole body 10. The bolts have nuts 22 which serve to hold the crown securely in position.

The section 23 fits into the collar 19 and is formed from concrete, has a bore 24 which renders it hollow. At the upper end, the concrete is formed into a cap 25. The section has reinforcing tension T-irons 26 similar to the irons 13, and held in position likewise, by annular members 27. The lower ends of the members 26 are outwardly disposed and engage at the under side of the collar 19 and the flange 19^a, thereby serving to hold the section firmly in position at the crown. The collar and the flange have suitable pockets 28 underneath the flange, which are formed to receive the laterally disposed ends of the tension members 26. The pole body or the section 23 may be provided with cross arms 29 or other suitable means for carrying the electric conductors and the like.

Having thus described our invention, we claim as new, and desire to secure by Letters Patent:

1. A pole, comprising a concrete body, T-irons arranged longitudinally of said body and provided with corrugated webs, said T-irons having the webs embedded in said body, rings encompassing said T-irons at separated points, said pole having an enlarged butt, said T-irons being completely embedded in said butt, rings embracing said T-irons within said butt, a section mounted upon said body, and means for securing said body and said section together.

2. A pole, comprising a body, a removable section, a crown upon said body having means for holding said section, said section having tension members with laterally disposed ends engaging at said crown, and means for securing said crown in position.

3. A pole, comprising a concrete body, a concrete section, said body and said section having tension members partly embedded therein, a crown carried by said body and engaged by said tension members of said body, said crown being formed into a socket to receive said section, said tension members of said section being disposed to engage at said crown to hold said section in position, and means carried by said body for removably securing said crown in position.

4. A pole, comprising a concrete body having a crown at the upper end thereof, a concrete section having a collar secured at the lower end thereof, and means for securing said collar to said crown, said body and said section having longitudinal tension members partly embedded therein and engaging respectively said crown and said collar.

5. A pole, comprising a concrete body having a crown at the upper end thereof, said body having tension members partly embedded therein, said crown having recesses adapted to receive the upper ends of said tension members, a concrete section having a collar at one end thereof, and means for mounting said collar securely upon said crown, said section having tension members partly embedded therein and provided with laterally disposed extremities, said collar having pockets adapted to receive said laterally disposed extremities of said tension members of said section.

6. A pole, comprising a concrete body and a concrete section having longitudinal tension members partly embedded therein and annular members at the outside encompassing said tension members, an annular crown mounted upon said body and having recesses adapted to receive the upper ends of said tension members of said body, said tension members of said section having the lower ends outwardly disposed, an annular collar upon said section and having pockets to receive said outwardly disposed ends of said tension members of said section, and bolts having sinuous shanks embedded in said body and engaging said crown and said collar to secure the same together.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WM. ROBERTS.

CARROLL ROBERTS.

Witnesses:

OLIVER H. ANDERSON,
SUSIE E. ROE.